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PATENT
Atty. Docket No.:
CIBT-P10-203

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Scott et al.

Serial No.: 09/754,032

Filed: 03-Jan-2001

Title: PATCHED GENES AND USES RELATED THERETO

Group Art Unit: 1646

Examiner: Not Yet Assigned

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

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INFORMATION DISCLOSURE STATEMENT UNDER 37C.F.R 1.97(b)

Submitted herewith on Form PTO-1449 is a list of documents known to Applicants, their Agent and/or Attorney in compliance with the requirements of 37 C.F.R. 1.56. A copy of each document listed is also being submitted herewith.

This Information Disclosure Statement is being filed before the mailing of the first office action on the merits; therefore, no fee is due.

Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached Form PTO-1449.

This submission does not represent that a search has been made or that no better art exists. Nor does it constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and applicants determine that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents.

Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there are any fees due in connection with the filing of this Statement, please charge the fees to our **Deposit Account, No. 18-1945.**

Respectfully submitted,
Ropes & Gray

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CIBT-P10-203	09/754,032	
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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5798209	25-Aug-1998	Chan	435	6	26-May-1995
	AB	5837538	17-Nov-1998	Scott	435	325	06-Oct-1995
	AC	5935810	10-Aug-1999	Friedman et al.	435	69.1	30-Nov-1994

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO
	AD	WO9611260	18-Apr-1996	PCT	C12N	5/00		

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(Including Author, Title, Date, Pertinent Pages Etc.)

	AE	Akimaru, H. et al., "Drosophila CBP is a co-activator of cubitus interruptus in hedgehog signaling", Nature 386 (6626): 735-738 (1997).
	AF	Akiyama, H. et al., "Cloning of a mouse smoothened cDNA and expression patterns of hedgehog signaling molecules during chondrogenesis and cartilage differentiation in conal mouse EC cells, ATDC5", Biophys Res. Comm., 235(1): 142-147 (1997).
	AG	Alberts, eds., Molecular Biology of the Cell, G-10 (1994).
	AH	Alcedo, J. et al., "The Drosophila smoothened gene encodes a seven-pass membrane protein, a putative receptor for the hedgehog signal", Cell, 86 (2): 221-232 (1996).
	AI	Alcedo, J. and Noll, M., "Hedgehog and its patched-smoothened receptor complex: a novel signaling mechanism at the cell surface", Biol. Chem., 378 (7): 583-590 (1997).
	AJ	Alexandre, C. et al., "Transcriptional activation of hedgehog target genes in Drosophila is mediated directly by the cutitus interrptus protein, a member of the GLI family of zinc finger DNA-binding proteins", Genes Dev., 19 (16): 2003-2013 (1996).
	AK	Bale, A., "Variable expressivity of patched mutations in flies and humans", Am. J. Human Genet., 60 (1): 10-12 (1997).
	AL	Bellusci, S. et al., "Involvement of Sonic hedgehog (Shh) in mouse embryonic lung growth and morphogenesis", Development, 124 (1): 53-63 (1997).
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	AR	Chanut, F. and Heberlein, U., "Role of the morphogenetic furow in establishing polarity in the Drosophila eye", Development, 121 (12): 4085-1094 (1995).
	AS	Chavrier et al., "The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach", Gene 112: 261-264 (1992).
	AT	Chen, E. et al., "Compartmental organization of the Drosophila genital imaginal disks", Development, 124 (1): 205-218 (1997).
	AU	Chen, Y. et al., "Dual roles for patched in sequestering and transducing Hedgehog", Cell, 87(3): 553-563 (1996).
	AV	Concordet, J. et al., "Spatial regulation of a zebrafish patched homoloogue reflects the roles of sonic hedgehog and protein kinase A in neural tube and somite patterning", Development, 122 (9): 2835-2846 (1996).
	AW	Dhawan et al., "Systematic Delivery of Human Growth Hormone by Injection of Genetically Engineered Myoblasts", Science 254: 1509-1512 (1991).
	AX	Dominguez, M. et al., "Sending and receiving the hedgehog signal: control by the Drosophila Gli protein cubitus interruptus", Science, 272 (5268): 1621-1625 (1996).
	AY	Echelard, Y. et al., "Sonic hedgehog, a member of a family of putative signaling molecules, is implicated in the regulation of CNS polarity", Cell, 75: 1417-1430 (1993).
	AY	Epps, J. et al., "*Oroshigane*, a new segment polarity gene of Drosophila melanogaster, functions in hedgehog signal transduction", Genetics 145 (4): 1041-1052 (1997).
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	BD	Gailani, M. et al., "The role of the human homologue of Drosophila patched in spradic basal cell carcinomas", Nat. Genet., 14 (1): 78-81 (1996).
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	BF	Goodrich, L. et al., "Altered neural cell fates and medulloblastoma in mouse patched mutants", Science, 277 (5329): 1109-1113 (1997).
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	BI	Grindley, J. et al., "Evidence for the involvement of the Gli gene family in embryonic mouse lung development", Dev. Biol., 188 (2): 337-348 (1997).
	BJ	Habuchi, et al., "Detailed deletion mapping of chromosome 9q bladder cancer: evidence or two tumour suppressor loci", Oncogene, 11:1671-1674 (1995).
	BK	Hahn, H. et al., "A mammalian patched homolog is expressed in target issues of sonic hedgehog and maps to a region associated with development abnormalities", J. Biol. Chem., 271 (21): 12125-12128 (1996).
	BL	Heemskerk, J. et al., "Drosophila hedgehog acts as a morphogen in cellular patterning", Cell 76: 449-460 (1994).
	BM	Hepker, J. et al., "Drosophila cubitus interruptus forms a negative feedback loop with patched and regulates expression of Hedgehog target genes", Development, 124 (2): 549-558 (1997).
	BN	Hidalgo, A. and Ingham, P., "Cell patterning in the Drosophila segment: spatial regulation of the segment polarity gene patched", Development, 110: 291-301 (1990).
	BO	Hooper et al., "The Drosophila patched gene encodes a putative membrane protein required for segmental patterning", Cell 59: 751-765 (1989).
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	BQ	Ingham, "*Hedgehog* points the way", Curr. Biol. 4: 347-350 (1994).
	BR	Ingham, P. et al., "Role of the Drosophila patched gene in positional signalling", Nature, 353: 184-187 (1991).
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	BT	Jensen, A. et al., "Expression of Sonic hedgehog and its putative role as a precursor cell mitogen in the developing mouse retina", Development, 124 (2): 363-371 (1997).
	BU	Jiang, J. et al., "Protein kinase A and hedgehog signaling in Drosophila limb development", Cell, 80 (4): 563-572 (1995).
	BV	Johnson, R. et al., "Patched overexpression alters wing disc size and pattern: transcriptional and post-transcriptional effects on hedgehog targets", Development, 121 (12): 4161-4170 (1995).
	BW	Johnson, R. et al., "Human homolog of patched, a candidate gene for the basal cell nevus syndrome", Science, 272 (5268): 1668-1671 (1996).
	BX	Kalderon, D., "Morphogenetic signalling. Responses to hedgehog", Curr. Biol., 5 (6): 2279-2289 (1995).

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	BZ	Kojima, T. et al., "Induction of a mirror-image duplication of anterior wing structures by localized hedgehog expression in the anterior compartment of Drosophila melanogaster wing imaginal discs", Gene, 148 (2): 211-7 (1994).
	CA	Krauss, S. et al., "A functionally conserved homolog of the Drosophila segment polarity gene *hh* is expressed in tissues with polarizing activity in zebrafish embryos", Cell, 75: 1431-1444 (1993).
	CB	Lepage et al., "Signal transduction by cAMP-dependent protein kinase A in Drosophila limb patterning", Nature, 373 (6516): 711-715 (1995).
	CC	Li, W., et al., "Function of protein kinase A in hedgehog signal transduction and Drosophila imaginal disc development", Cell, 80 (4): 553-562 (1995).
	CD	Loftus, S., et al., "Murine model of Niemann-Pick C disease: mutation in a cholesterol homeostatis gene", Science, 277 (5323): 232-235 (1997).
	CE	Ma, C. et al., "The segment polarity gene hedgehog is required for progression of the morphogenic furrow in the developing Drosophila eye", Cell, 75 (5): 927-938 (1993).
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	CH	Marigo, V. et al., "Biochemical evidence that patched is the Hedgehog receptor", Nature, 384 (6605): 176-179 (1996).
	CI	Marigo, V. et al., "Conservation in hedgehog signaling: induction of a chicken patched homolog by Sonic hedgehog in the developing limb", Development, 122 (4): 1225-1233 (1996).
	CJ	Marigo, V. et al., "Sonic hedgehog differentially regulates expression of GLI and GLI3 during limb development", Dev. Biol., 180 (1): 273-283 (1996).
	CK	Marigo, V. et al., "Regulation of patched by sonic hedgehog in the developing neural tube", Proc. Natl. Acad. Sci. USA, 93(18): 9346-9351 (1996).
	CL	Nakamura, T. et al., "Induction of osteogenic differentiation by hedgehog proteins", Biochem. Biophys. Res. Comm., 237 (2): 465-469 (1997).
	CM	Nakano, Y. et al., "A protein with several possible membrane-spanning domains encoded by the Drosophila segment polarity gene patched", Nature, 341: 508-513 (1989).
	CN	Nusse, R. "Patching up Hedgehog", Nature, 384 (6605): 119-120 (1996).
	CO	Oro, A. et al., "Basal cell carcinomas in mice overexressing sonic hedgehog", Science, 276(5313)L 817-821 (1997).

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	CR	Perrimon, N., "Serpentine proteins lither into the wingless and hedgehog fields", Cell, 86 (4): 513-516 (1996).
	CS	Phillips, R. et al., "The Drosophila segment polarity gene patched is involved in a position signalling mechanism in imaginal discs", Development, 110: 105-114 (1990).
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	CW	Roelink, H. et al., "Floor plate and motor neuron induction by *vhh*-1, a vertebrate homolog of hedgehot expressed by the notochord", Cell, 76: 761-775 (1994).
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	CY	Roush, W., "Hedgehog's patterning call is patched through, smoothly", Science, 274 (5291): 1304-1305 (1996).
	CZ	Sanicola, M. et al., "Drawing a stripe in Drosophila imaginal disks: negative regulation of decapentaplagic and patched expression by engrailed", Genetics, 139 (2): 745-756 (1995).
	DA	Schuske, K. et al., "Patched overexpression causes loss of wingless expression in Drosophila embryos", Dev. Biol., 164 (1): 300-301 (1994).
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	DC	Simcox, A. et al., "Imaginal discs can be recovered from culture embryos mutant for the segment-polarity genes engrailed, naked and patched but nor from wingless", Development, 107: 715-722 (1989).
	DD	Sisson, J. et al., "Costal2, a novel kinesin-related protein in the Hedgehog signaling pathway", Cell, 90 (2): 235-245 (1997).
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	DF	Spradling et al., "Transposition of Cloned P Elements into *Drosophila* Germ Line Chromosomes", Science 218: 341-347 (1982).

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	DH	Stone, D. et al., "The tumor-suppressor gene patched encodes a candidate receptor for Sonic hedgehog", Nature, 384 (6605): 129-134 (1996).
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	DL	Tabata, T. et al., "The Drosophila hedgehog gene is expressed specifically in posterior compartment cells and is a target of engrailed regulation", Genes Dev., 6(12B): 2635-2645 (1992).
	DM	Tabata, T. et al., "Hedgehog is a signaling protein with a key role in patterning Drosophila imaginal discs", Cell, 76: 89-102 (1994).
	DN	Takabatake, T. et al., "Hedgehog and patched gene expression in adult ocular tissues", FEBS Letters, 410 (2-3): 485-489 (1997).
	DO	Thummel, C. et al., "Vectors for Drosopl ila P-element mediated transformation and tissue culture transfection", Gene, 74: 445-446 (1988).
	DP	Von Ohlen, T. et al.,, "Hedgehog signaling regulates transcription through cubitus interruptus, a sequence-specific DNA binding protein", Proc. Natl. Acad. Sci. USA, 94 (6): 2404-2409 (1997).
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	DR	Vortkamp, A., et al., "Regulation of rate of cartilage differentiation by Indian hedgehog and PTH-related protein", Science, 273 (5275): 613-622 (1996).
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